



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,310	08/24/2005	Yves Bader	HT3930USPCT	6435
7590 09/03/2009				
John E Griffiths E I Du Pont De Nemours and Company Legal Patent Records Center 4417 Lancaster Pike Wilmington, DE 19805			EXAMINER JOHNSON, JENNA LEIGH	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 09/03/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/524,310

**Applicant(s)**

BADER ET AL.

**Examiner**

Jenna-Leigh Johnson

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 15-18, 20, 21, 25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 15-18, 20, 21, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/27/09
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 22 and 23 have been renumbered 25 and 26.

3. The Amendment submitted on May 27, 2009, has been entered. Claims 5 - 14, 19, and 22 - 24 have been cancelled. Claims 1 - 3 have been amended and claims 25 and 26 have been added. Therefore, the pending claims are 1 - 4, 15 - 18, 20, 21, 25, and 26.

4. The cancellation of claims 5 - 8, 13, and 14 renders moot the rejection of those claims set forth in the previous Office Action.

5. The amendment to claim 1 is sufficient to remove the 35 USC 112 2<sup>nd</sup> paragraph rejection because the applicant has removed the term ply from the claims.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1 - 4, 15 - 18, 20, 21, 25, and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is unclear how to make the woven fabric recited in the claim, such that the fabric has the desired sets of warp and weft systems interwoven together in a such a manner that the fabric comprises two adjacent pockets alternately made of two different warp and weft

Art Unit: 1794

systems. First, it is unclear multiple warp or weft layers to create a fabric with a face portion that is distinct from the back portion directly opposite of it. In the description the figures show plies that are woven together, implying that the fabric has multiple layers, but it is unclear how the individual yarns of the different plies are woven together. The figures only show the individual plies interacting and do not detail the yarns themselves. Do all the yarns from the lower ply have to cross over into the top ply or do just some of the yarns cross over to the top portion to form the upper ply? And what weave structure is used to create this pattern? The examples refer to the weave patterns shown in Figures 5 or 6 to make the plies. But the weave patterns in Figures 5 and 6 are for a single layer of woven fabric formed from only two yarns. Further, the weave pattern does not show or hint at a second layer interwoven with this ply. Nor is there any teaching or suggestion as to how this weave structure is combined with a second layer to form the adjacent pockets of alternating materials, since the pattern does not appear to produce any pockets or use more than two sets of yarns, a warp set and a weft set. It is unclear how the plies are woven together to make the claimed fabric.

Also, it is unclear how many yarns systems are being claimed by the applicant, and what the applicant considered to be a different yarn system and what qualifies as a yarn system. In the examples, the fabric comprises two different types of yarns that are interwoven to make the claimed fabric. The disclosure does not seem to teach or require that any more than two different materials are used in the warp and weft systems? If the yarns follow a different weave pattern than the adjacent yarns, or is in a different layer or ply than the other yarns does that qualify them as a separate yarn system?

Further, the applicant argues that the claimed invention is different from the prior art inventions of Faircloth (3,359,610) or WO 03/039280 because the prior art uses plies and the applicant's invention does not use plies (response, pages 5 - 6). As set forth previously, it is unclear how the applicant is defining the term plies. But the disclosure clearly implies some type of ply structure is required to produce the alternating pockets with different materials on opposite sides of the fabric in the pocket regions. How are the pockets formed if more than one ply is not used by the applicant? Further, if the applicant is not using either

Art Unit: 1794

separately constructed plies, as described by WO 03/039280, or interweaving the yarns within a multi-layered weave structure where certain yarns cross from the upper ply to the lower ply, it is unclear what the actual weave structure is required to make the claimed fabric. What other methods are available in the textile art, and more particularly the weaving art, to produce the claimed fabric? Is there or isn't there some sort of multiple layer structure? And, more importantly, how are the yarns and layers interconnected to form the claimed fabric?

8. Claims 1 - 4, 15 - 18, 20, 21, 25, and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 1 is indefinite. First, it is unclear from the claim and the description how many yarn systems are required by the phrase "at least two warp and weft systems". Is there one warp and one weft system, making two total systems, two warp and one weft system, making three total yarn systems, or two warp and two weft systems, making four total weft systems? Further, in the last paragraph of claim 1, the limitation recites that the adjacent pocket is produced from "two different warp and weft systems". Are these in addition to the multiple yarn systems set forth originally? If so, how many total different systems are required in the final fabric. And does each yarn system have to be made from a different material? What qualifies as a different yarn system. Further, it is noted that the applicant repeatedly refers to "a warp system" throughout the claim. Are these warp yarns different from the warp yarns originally recited in line 3, or does the applicant intend them to be the same yarn system. If they are suppose to be the same then the applicant should change the identifier from "a" to "the" or "said" to indicate that this is the same system. If the system should be different than the identifier should include a further description such as, "a second" weft system to distinguish the warp systems from any other warp systems in the fabric. Further, it is suggested that the applicant not only add identifiers to the term "a side", but also clarify whether the "a side" listed in lines 16 - 17, is the same as one of the sides listed in line 5. It noted for purposes of interpretation, the figures reference numbers are not given any weight in a claim. Thus, the use of S1 and S2 in parentheses

is not considered to add further weight or description to the claim because it is a reference number in a figure. The applicant should either remove the terms from the parentheses or use terms such as first or second to describe the sides.

Claims 2 - 4, 15 - 18, 20, 21, 25, and 26 are rejected due to their dependency on claim 1.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1 - 4, 15 - 18, 20, 21, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/039280 (English Translation) in view of Faircloth.

The features of WO 03/039280 and Faircloth have been set forth in the previous Office Action. The rejection argues it would have been obvious to use the weave design taught by Faircloth in the fabric of WO 03/039280 to produce a woven fabric where the layers are interwoven to create adjacent pocket regions of different materials such that the alternating regions will shrink upon exposure to heat. The patterns taught by Faircloth include multiple sets of yarns, including at least two warp systems, one in the lower ply and one in the upper ply, two weft systems, one in the lower ply and one in the upper ply, and at least a third weft system made from a shrinkable yarn that traverses between the upper and lower plies to produce alternating pockets.

With regards to claim 25, WO 03/039280 teaches that the aramid yarns are available as fibers (i.e., staple fibers), threads (i.e., filaments), or other structures (page 2, paragraph 8). Thus, the aramid yarns can be made multifilament or even monofilament structure.

Further, WO 03/039280 teaches that the aramid yarns can be made from para-aramid or meta-aramid materials (page 2, paragraphs 8 and 9). Also, WO 03/039280 discloses that blended yarns can be used to

make the heat-resistant material (page 6, paragraph 5). Thus, it would have been obvious to one having ordinary skill in the art to use a blended yarn comprising at least two different aramids in the fabric, since aramid fibers are highly desired fire-resistant materials used in fire-resistant fabric. Thus, claim 26 is rejected.

***Response to Arguments***

12. Applicant's arguments filed May 27, 2009 have been fully considered but they are not persuasive. The applicant argues that the combination of WO 03/039820 and Faircloth does not teach that claimed invention because WO 03/039820 does not teach interweaving the layers or plies to create alternating pockets. However, WO 03/039820 is combined with Faircloth to provide a teaching to produce an interwoven fabric with different pocket regions, which can be treated with heat to create puckered regions, alternating with non-puckered regions by using a multi-layer or multi-ply weave design. The combination of the two references includes the number of warp and weft systems required by the claim, the yarns are interwoven to build pockets, the yarns have different dimensional thermal shrinkage, and the alternating pockets are made from different combinations of materials such that the fabric has pocket regions which pucker and pocket regions which do not pucker. Thus, it teaches the features which are specifically recited in the claim.

Further, the applicant argues that the prior art requires either multiple plies or multiple layers to produced that pocket structure (response, page 6). However, the claim does not exclude a ply or multiple layered structured from being used to produced the claimed fabric. And as set forth above, it is not clear how the claimed fabric could be produced without some sort of multiple layer or plied structure. The upper ply of Faircloth would correspond to side S1 and the lower ply would correspond to side S2. And further as is detailed in the figures yarns switch between the upper and lower portions to produced a different group of warp and weft systems, forming alternating pocket regions wherein a set of the regions shrink upon exposure to treatment and the remaining regions pucker. Therefore, the combination teaches all the claimed features.

Further, features which are not claimed, i.e., the exclusion of interwoven plies or distinct layers, cannot be relied on to show patentability. Thus, the rejection is maintained.

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Johnson whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Wednesday (8:30 - 4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jlj  
August 24, 2009

/Jenna-Leigh Johnson/  
Primary Examiner, Art Unit 1794